

## SEQUENCE LISTING

<110> Roche Diagnostics GmbH  
 <120> Expression of alkaline phosphatase in yeast

<130> 5387/00/

*SB*  
 <140>  
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<160> 38

<170> PatentIn Ver. 2.1

<210> 1  
 <211> 1476  
 <212> DNA  
 <213> Bovine

<400> 1

gaattcctca tcccagctga ggaggaaaaac cccgccttct ggaaccgcca ggcagccag 60  
 gcccggatg tagccaagaa gttgcagccg atccagacag ctgccaagaa tgcacatcctc 120  
 ttcttgggg atggatggg ggtgcctacg gtgacagcca ctcgatcct aaaggggcag 180  
 atgaatggca aactgggacc tgagacaccc ctggccatgg accagttccc atacgtggct 240  
 ctgtccaaga catacaacgt ggacagacag gtgcagaca ggcaggcac tgccactgccc 300  
 tacctgtgtg gggtaaggg caactacaga accatcggtg taagtgcagc cgcccgctac 360  
 aatcagtgtca acacgacacg tggaaatgag gtcacgtctg tgatcaaccc ggccaagaaa 420  
 gcagggaaagg ccgtgggagt ggtgacacc accagggtgc agcatgcctc cccagccgg 480  
 gcctacgcgc acacgggtgaa cggaaactgg tactcagacg cgcacactgccc tgctgatgca 540  
 cagaagaatg gctgccagga catccggca cagctggctc acaacatggaa tattgacgtg 600  
 atcctgggtg gaggccgaat gtacatgtt cctgagggga ccccgacacc tgaataaccca 660  
 gatgtatgcca gtgtgaatgg agtccgaaag gacaaggcaga acctgggtc ggaatggcag 720  
 gccaaggcacc agggagccca gtatgtgtgg aacccgactg cgcacacttca ggcggccgat 780  
 gactccagtg taacacaccc catggccctc tttgagccgg cagacatgaa gtataatgtt 840  
 cagcaagacc acaccaagga cccgaccctg gcccggatgaa cggaggcggc cctgcaagtg 900  
 ctgagcagga accccccgggg cttctaccc ttcgtggagg gaggccgcat tgaccacgg 960  
 caccatgacg gcaaagctt tatggcactg actgaggcgta tcatttttga caatgccatc 1020  
 gccaaggcta acgagctca tagcgaactg gacacgctga tccttgcac tgcagaccac 1080  
 tcccattgtct tctcttttgg tggctacaca ctgcgtgggg cctccatttt cggtctggcc 1140  
 cccggcaagg ccttagacag caagtccctac acctccatcc tctatggcaa tggcccgaggc 1200  
 tatgcgtttg gccccggatc gaggcccgat gtaatggca gcacaagcga ggaaccctca 1260  
 taccggcagc agggccggct gcccctggct agcgagaccc acggggggcga agacgtggcg 1320  
 gtgttcgcgc gaggccggca ggcgcacccctg gtgcacggcg tgcaggagga gaccttcgtg 1380  
 ggcacatca tggccatttgc gggctggctg gagccctaca ccgactgcaa tctgccagcc 1440  
 cccggccaccc ccaccagcat ccccgactag ggtacc 1476

<210> 2  
 <211> 40  
 <212> DNA  
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Artificial

<400> 2

gcccggatcc tccatcccttccatcc ctgcggggggcc

<210> 3  
 <211> 36  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Artificial

<400> 3  
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36

<210> 4  
 <211> 487  
 <212> PRT  
 <213> Bovine

<400> 4  
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 1 5 10 15

Ala Gln Ala Leu Asp Val Ala Lys Lys Leu Gln Pro Ile Gln Thr Ala  
 20 25 30

Ala Lys Asn Val Ile Leu Phe Leu Gly Asp Gly Met Gly Val Pro Thr  
 35 40 45

Val Thr Ala Thr Arg Ile Leu Lys Gly Gln Met Asn Gly Lys Leu Gly  
 50 55 60

Pro Glu Thr Pro Leu Ala Met Asp Gln Phe Pro Tyr Val Ala Leu Ser  
 65 70 75 80

Lys Thr Tyr Asn Val Asp Arg Gln Val Pro Asp Ser Ala Gly Thr Ala  
 85 90 95

Thr Ala Tyr Leu Cys Gly Val Lys Gly Asn Tyr Arg Thr Ile Gly Val  
 100 105 110

Ser Ala Ala Ala Arg Tyr Asn Gln Cys Asn Thr Thr Arg Gly Asn Glu  
 115 120 125

Val Thr Ser Val Ile Asn Arg Ala Lys Lys Ala Gly Lys Ala Val Gly  
 130 135 140

Val Val Thr Thr Arg Val Gln His Ala Ser Pro Ala Gly Ala Tyr  
 145 150 155 160

Ala His Thr Val Asn Arg Asn Trp Tyr Ser Asp Ala Asp Leu Pro Ala  
 165 170 175

Asp Ala Gln Lys Asn Gly Cys Gln Asp Ile Ala Ala Gln Leu Val Tyr  
 180 185 190

Asn Met Asp Ile Asp Val Ile Leu Gly Gly Arg Met Tyr Met Phe  
 195 200 205

Pro Glu Gly Thr Pro Asp Pro Glu Tyr Pro Asp Asp Ala Ser Val Asn  
 210 215 220

Gly Val Arg Lys Asp Lys Gln Asn Leu Val Gln Glu Trp Gln Ala Lys  
 225 230 235 240

His Gln Gly Ala Gln Tyr Val Trp Asn Arg Thr Ala Leu Leu Gln Ala  
 245 250 255  
 Ala Asp Asp Ser Ser Val Thr His Leu Met Gly Leu Phe Glu Pro Ala  
 260 265 270  
 Asp Met Lys Tyr Asn Val Gln Gln Asp His Thr Lys Asp Pro Thr Leu  
 275 280 285  
 Ala Glu Met Thr Glu Ala Ala Leu Gln Val Leu Ser Arg Asn Pro Arg  
 290 295 300  
 Gly Phe Tyr Leu Phe Val Glu Gly Gly Arg Ile Asp His Gly His His  
 305 310 315 320  
 Asp Gly Lys Ala Tyr Met Ala Leu Thr Glu Ala Ile Met Phe Asp Asn  
 325 330 335  
 Ala Ile Ala Lys Ala Asn Glu Leu Thr Ser Glu Leu Asp Thr Leu Ile  
 340 345 350  
 Leu Val Thr Ala Asp His Ser His Val Phe Ser Phe Gly Gly Tyr Thr  
 355 360 365  
 Leu Arg Gly Thr Ser Ile Phe Gly Leu Ala Pro Gly Lys Ala Leu Asp  
 370 375 380  
 Ser Lys Ser Tyr Thr Ser Ile Leu Tyr Gly Asn Gly Pro Gly Tyr Ala  
 385 390 395 400  
 Leu Gly Gly Ser Arg Pro Asp Val Asn Gly Ser Thr Ser Glu Glu  
 405 410 415  
 Pro Ser Tyr Arg Gln Gln Ala Ala Val Pro Leu Ala Ser Glu Thr His  
 420 425 430  
 Gly Gly Glu Asp Val Ala Val Phe Ala Arg Gly Pro Gln Ala His Leu  
 435 440 445  
 Val His Gly Val Gln Glu Glu Thr Phe Val Ala His Ile Met Ala Phe  
 450 455 460  
 Ala Gly Cys Val Glu Pro Tyr Thr Asp Cys Asn Leu Pro Ala Pro Ala  
 465 470 475 480  
 Thr Ala Thr Ser Ile Pro Asp  
 485

&lt;210&gt; 5

&lt;211&gt; 1476

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Artificial

&lt;400&gt; 5

gaattcttga ttccagctga agaagaaaat ccagctttt ggaatagaca agctgctcaa 60  
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 tttttgggtg atggtatggg ttttccaact gttactgcta ctagaatttt gaagggtcaa 180  
 atgaatggta agttgggtcc agaaaactcca ttggctatgg atcaatttcc atacgttgct 240  
 ttgtcttaaga cttacaatgt tgatagacaa gttccagatt ctgctggta tgctactgct 300  
 tacttggtg gtgttaaggg taattacaga actattggg tttctgctgc tgctagatac 360  
 aatcaatgta atactactag aggtaatgaa gttacttctg ttattaatag agctaagaag 420  
 gctggtaagg ctgttgggtg tgttactact actagagttc aacatgcttc tccagctggt 480  
 gcttacgctc atactgttaa tagaaattgg tactctgtg ctgatggcc agctgatgct 540  
 caaaagaatg gttgtcaaga tattgtctgcaattgggtt acaatatgga tattgtatgtt 600  
 attttgggtg gtggtagaat gtacatgttt ccagaaggta ctccagatcc agaataccca 660  
 gatgatgctt ctgttaatgg tggttagaaag gataagcaa atttggttca agaatggcaa 720  
 gctaaggatc aagggtctca atatgtttg aatagaactg ctttggcga agctgctgat 780  
 gattcttagt ttactcattt gatgggtttg tttgaaccag ctgatgtgaa gtataatgtt 840  
 caacaagatc atactaagga tccaactttg gctgaaatgaa ctgaaagctgc tttgcaagtt 900  
 ttgtcttagaa atccaagagg tttttacttg tttgttgaag gtggtagaat tgatcatggt 960  
 catcatgatg gtaaggctta tatggcttg actgaagcta ttatgtttga taatgctatt 1020  
 gctaaggcta atgaattgac ttctgaattt gatactttg ttttggttac tgctgatcat 1080  
 agtcatgttt tttcttttgg tggttacact ttgagaggta cttctatattt tggttggct 1140  
 ccaggttaagg ctttggatag taagtcttac acttctatattt tttatggtaa tggtccaggt 1200  
 tatgcttgg gtgggggttc tagaccagat gttatggta gtacttagtga agaaccatct 1260  
 tacagacaac aagctgctgt tccattggct agtggaaactc atgggtgtga agatgttgct 1320  
 gttttgcta gaggtccaca agtcatttg gttcatgggt ttcaagaaga aacttttgtt 1380  
 gctcatatta tggctttgc tggttgggtt gaaccataca ctgattgtaa tttgccagct 1440  
 ccagctactg ctactagtat tccagattaa ggtacc 1476

&lt;210&gt; 6

&lt;211&gt; 78

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Artificial

&lt;400&gt; 6

gcgcaattc ttgattccag ctgaagaaga aaatccagct ttttggataa gacaagctgc 60  
 tcaagctttg gatgttgc 78

&lt;210&gt; 7

&lt;211&gt; 70

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Artificial

&lt;400&gt; 7

ccaaaaacaa aataacattc ttagcagcag tttgaattgg ttgcaacttc ttagcaacat 60  
 ccaaagcttg 70

&lt;210&gt; 8

&lt;211&gt; 69

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Artificial

&lt;400&gt; 8

gaatgttatt ttgttttgg gtgtatggat ggggtttcca actgttactg ctactagaat 60

tttgaaggg 69

<210> 9

<211> 70

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Artificial

<400> 9

ggaaattgat ccatagccaa tggagttct ggacccaact taccattcat ttgacccttc 60  
aaaattctag 70

<210> 10

<211> 71

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Artificial

<400> 10

gctatggatc aatttccata cgttgcttg tctaagactt acaatgttga tagacaagtt 60  
ccagattctg c 71

<210> 11

<211> 71

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Artificial

<400> 11

ccaatagttc tgtaattacc cttaacacca cacaagtaag cagtagcagt accagcagaa 60  
tctggaacct g 71

<210> 12

<211> 72

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Artificial

<400> 12

gtaattacag aactattggc gtttctgctg ctgctagata caatcaatgt aatactacta 60  
gaggtaatga ag 72

<210> 13

<211> 74

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Artificial

<400> 13  
agtaacaaca ccaacagcct taccaggcctt ctttagctcta ttaataacag aagtaacttc 60  
attacctcta gtag 74

<210> 14  
<211> 74  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Artificial

<400> 14  
gctgttgttgg ttgttactac tactagagtt caacatgctt ctccagctgg tgcttacgct 60  
catactgtta atag 74

<210> 15  
<211> 68  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Artificial

<400> 15  
caaccattct tttgagcatc agctggcaaa tcagcatcag agtaccaatt tctattaaca 60  
gtatgagc 68

<210> 16  
<211> 55  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Artificial

<400> 16  
gatgctcaaa agaatggttg tcaagatatt gctgctcaat tggtttacaa tatgg 55

<210> 17  
<211> 72  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Artificial

<400> 17  
ccttctggaa acatgtacat tctaccacca cccaaaataa catcaatatac catattgtaa 60  
accaatttgg ca 72

<210> 18  
<211> 71  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Artificial

<400> 18  
gtacatgttt ccagaaggta ctccagatcc agaataccca gatgatgctt ctgttaatgg 60

tgtagaaag g 71

<210> 19  
<211> 73  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Artificial

<400> 19  
catattgagc accttgatgc ttagcttgcc attcttgaac caaattttgc ttatccttgc 60  
taacaccatt aac 73

<210> 20  
<211> 71  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Artificial

<400> 20  
gcatcaaggt gctcaatatg tttggaatag aactgctttg ttgcaagctg ctgatgattc 60  
tagtgttact c 71

<210> 21  
<211> 54  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Artificial

<400> 21  
cttcatatca gctggttcaa acaaaccat caaatgagta acactagaat catc 54

<210> 22  
<211> 59  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Artificial

<400> 22  
gaaccagctg atatgaagta taatgttcaa caagatcata ctaaggatcc aactttggc 59

<210> 23  
<211> 67  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Artificial

<400> 23  
cctcttgat ttcttagacaa aacttgaaa gcagcttcag tcatttcagc caaagttgga 60  
tccttag 67

<210> 24

<211> 69

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Artificial

<400> 24

gtctagaaat ccaagagggtt tttacttggtt tggtgaaggtt ggtagaattt atcatgggtca 60  
tcatgatgg 69

<210> 25

<211> 73

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Artificial

<400> 25

ccttagcaat agcattatca aacataatag cttcagtcaa agccatataa gccttaccat 60  
catgatgacc atg 73

<210> 26

<211> 74

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Artificial

<400> 26

gataatgcta ttgcttaaggc taatgaattt acttctgaat tggatacttt gattttgggtt 60  
actgctgatc atag 74

<210> 27

<211> 73

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Artificial

<400> 27

ccaaaccaaa aatagaagta cctctcaaag tgtaaccacc aaaagaaaaa acatgactat 60  
gatcagcagt aac 73

<210> 28

<211> 73

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Artificial

<400> 28

cttctatttt tggtttggct ccaggtaagg ctttggatag taagtcttac acttcttattt 60  
tgtatggtaa tgg 73

<210> 29  
<211> 76  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Artificial

<400> 29  
ctagtactac cattaacatc tggtagttagaa ccaccaccca aagcataacc tggaccatta 60  
ccataaaaa tagaag 76

<210> 30  
<211> 77  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Artificial

<400> 30  
gatgttaatg gtatgtactag tgaagaacca tcttacagac aacaagctgc tgttccattg 60  
gctatgtaaa ctcatgg 77

<210> 31  
<211> 73  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Artificial

<400> 31  
caccatgaac caaatgagct tgtggacctc tagcaaaaac agcaacatct tcaccaccat 60  
gagtttcaact agc 73

<210> 32  
<211> 74  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Artificial

<400> 32  
gctcatttgg ttcatggtgt tcaagaagaa acttttggtg ctcattttat ggctttgct 60  
ggttgtgttg aacc 74

<210> 33  
<211> 82  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Artificial

<400> 33  
gcgcggtaacc ttaatctgga atactatgttag cagtagctgg agctggcaaa ttacaatcag 60  
tgtatggttc aacacaacca gc 82

<210> 34  
<211> 31  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Artificial

<400> 34  
gcgcgcctag gagatctaac atccaaagac g

31

<210> 35  
<211> 29  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Artificial

<400> 35  
cgcgcgctag cggatccgca caaacgaaag

29

<210> 36  
<211> 10  
<212> PRT  
<213> *Saccharomyces cerevisiae*

<400> 36  
Glu Ala Glu Ala Glu Phe Leu Ile Pro Ala  
1 5 10

<210> 37  
<211> 4  
<212> PRT  
<213> *Saccharomyces cerevisiae*

<400> 37  
Leu Ile Pro Ala  
1

<210> 38  
<211> 6  
<212> PRT  
<213> *Saccharomyces cerevisiae*

<400> 38  
Glu Ala Glu Ala Glu Phe  
1 5